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**DIFFERENTIAL EQUATIONS**

**STD: 12**

**Answer the following:**

1. Solve: 
2. Find the equation of the curve passing through (1, 0) and which has slope 
3. Solve: 
4. Solve: 
5. Solve: 
6. Solve : 
7. Solve: 
8. Solve: 
9. Solve: 
10. Find the cubic polynomial in  which attains its maximum value 4 and minimum value 0 at

 respectively.

1. Solve: 
2. Solve : 13.Solve: 
3. Solve: 

15. Solve: 

16. Solve: 

17. The number of bacteria in a yeast culture grows at a rate which is proportional to the number present. If the population of a colony of yeast bacterial triples in 1 hour. Show that the number of bacteria at the end of five hours will be  times of the population at initial time.